Features

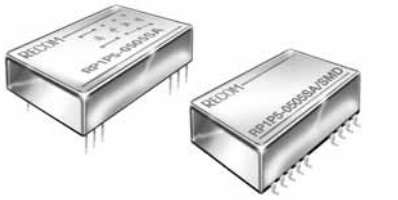
Regulated Converters

- 2:1 Wide Input Voltage Range
- 1.5 Watts Regulated Output Power
- 500VDC Isolation
- Pi Input Filter
- Low Ripple and Noise
- Five-Sided Shield
- Standard DIP24 and SMD-Pinning
- 2 Year Warranty
- Efficiency to 55%

POWERLINE
DC/DC-Converter

RP1P5-S_DA Series

1.5 Watt DIP24 & SMD, Single & Dual Output



RECOM

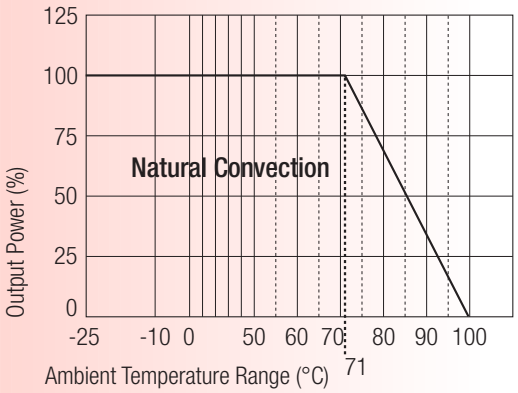
Selection Guide 5V, 12V, 24V Input Types

Part Number	Input Range	Output Voltage	Output Current	Input[2] Current	Efficiency[3]	Capacitor[4] Load max.
DIP24 (SMD)	VDC	VDC	mA	mA	%	µF
RP1P5-0505SA**	4.5-5.5	5	300	600	54	470
RP1P5-0512SA**	4.5-5.5	12	125	625	52	330
RP1P5-0515SA**	4.5-5.5	15	100	588	55	330
RP1P5-1205SA**	10.8-13.2	5	500	245	55	470
RP1P5-1212SA**	10.8-13.2	12	125	260	52	330
RP1P5-1215SA**	10.8-13.2	15	100	245	55	330
RP1P5-2405SA**	21.6-26.4	5	500	125	54	470
RP1P5-2412SA**	21.6-26.4	12	125	130	52	330
RP1P5-2415SA**	21.6-26.4	15	100	123	55	330
RP1P5-0505DA**	4.5-5.5	±5	200 / -100	682	48	330
RP1P5-0512DA**	4.5-5.5	±12	±60	613	51	110
RP1P5-0515DA**	4.5-5.5	±15	±50	600	54	110
RP1P5-1205DA**	10.8-13.2	±5	200 / -100	278	49	330
RP1P5-1212DA**	10.8-13.2	±12	±60	255	51	110
RP1P5-1215DA**	10.8-13.2	±15	±50	250	54	110
RP1P5-2405DA**	21.6-26.4	±5	200 / -100	142	48	330
RP1P5-2412DA**	21.6-26.4	±12	±60	128	51	110
RP1P5-2415DA**	21.6-26.4	±15	±50	125	54	110
Specials						
RP2P0-2015DAA-M1**	9-21	±15	±66			2 W output
RP2P0-0508SAA	4.5-5.5	8	200			3 kVDC Isolation
RP1P5-1206SAA	10-15	6	167			1 kV AC Isolation

** add Suffix SMD for SMD package

Derating-Graph (Ambient Temperature)

RP1P5-2405SA



Derating graphes are valid only for the shown part numbers. If you need detailed derating-information about a part-number not shown here please contact our technical customer service at info@recom-development.at

Specifications (typical at nominal input and 25°C unless otherwise noted)

Input Voltage Range	5V nominal input	4.5-5.5VDC
	12V nominal input	10.8-13.2VDC
	24V nominal input	21.6-26.4VDC
	48V nominal input	43.2-52.8VDC
Input Filter		Pi type
Output Power		1.5W max.
Output Voltage Accuracy (full Load and nominal Vin)		±4%
Minimum Load		0%
Line Regulation (LL-HL at full load)		±0.3%
Load Regulation (25% to 100% FL)	5V Dual outputs	±1.5%
	others	±0.5%
Cross Regulation (asymmetrical load 25%/100% FL)		±5%
Ripple and Noise (20MHz bandwith)		50mVp-p
Temperature Coefficient		±0.02%/°C, max.
Transient Response (25% load step change)		200µS
Short Circuit Protection		Short term
Efficiency		see „Selection Guide“ table
Isolation Voltage		500VDC min.
Isolation Resistance		10^9 Ω min.
Isolation Capacitance		30pF max.
Operating Frequency		20kHz min. / 300kHz typ.

continued on next page

RP1P5-S_DA Series

Specifications (typical at nominal input and 25°C unless otherwise noted)

Operating Temperature Range		-25°C to +71°C
Maximum Case Temperature		+100°C
Storage Temperature Range		-55°C to +105°C
Thermal Impedance	Natural convection	20°C/Watt
Thermal Shock		MIL-STD-810D
Vibration		10-55Hz, 2G, 30 Min. along X, Y and Z
Relative Humidity		5% to 95% RH
Case Material		Nickel-Coated copper
Base Material		Non-conductive black plastic
Potting Material		Epoxy (UL94-V0)
Conducted Emissions	EN55022	Level A
Radiated Emissions	EN55022	Level A
ESD	EN61000-4-2	Perf. Criteria 2
Radiated Immunity	EN61000-4-3	Perf. Criteria 2
Fast Transient	EN61000-4-4	Perf. Criteria 2
Surge	EN61000-4-5	Perf. Criteria 2
Conducted Immunity	EN61000-4-6	Perf. Criteria 2
Weight	DIP	16g
	SMD	18g
Dimensions	DIP	31.8 x 20.3 x 10.2mm
	SMD	32.0 x 20.3 x 10.9mm
MTBF (see note 1)		5.531 x 10^6 Hours

Notes :

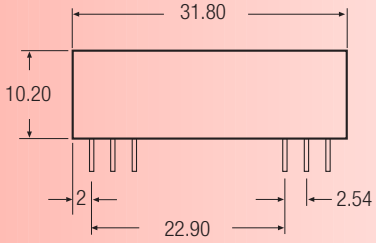
1. BELLCORE TR-NWT-000332. Case I: 50% Stress, Temperature at 40 °C (Ground fixed and controlled environment).
2. Maximum value at nominal input voltage and full load of standard type.
3. Typical value at nominal input voltage and full load.
4. Test by minimum Vin and constant resistor load.
5. See application notes for EMI-filtering.

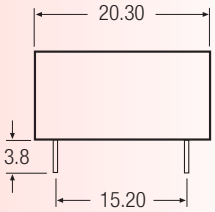
RP1P5-S_DA Series

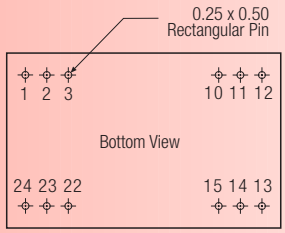
Package Style and Pinning (mm)

DIP24 Package Style

3rd angle projection







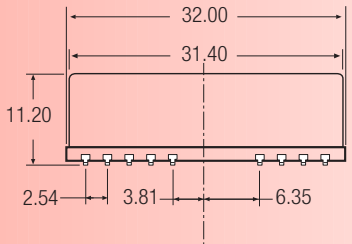
Pin Connections

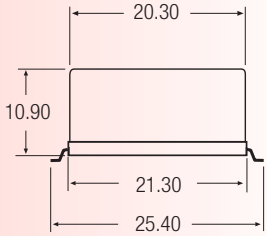
Pin #	Single	Dual
1	+ Vin	+ Vin
2	NC	– Vout
3	NC	Com
10	– Vout	Com
11	+ Vout	+ Vout
12	– Vin	– Vin
13	– Vin	– Vin
14	+ Vout	+ Vout
15	– Vout	Com
22	NC	Com
23	NC	– Vout
24	+ Vin	+ Vin

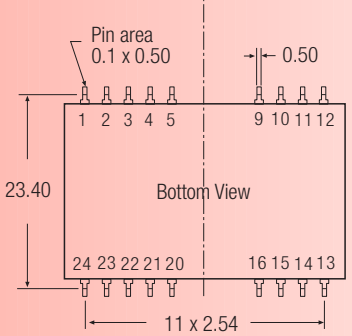
NC = No Connection

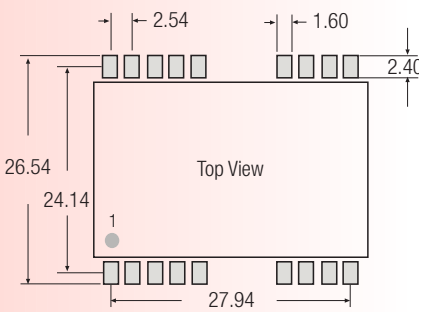
Pin Pitch Tolerance ±0.35 mm

SMD Package Style









SMD Package Style

Same spec. as the original DIP spec. and pin definition, excl. of the SMD type pin.

Pin Connections

Pin #	Single	Dual
1	+ Vin	+ Vin
2	NC	– Vout
3	NC	Com
10	– Vout	Com
11	+ Vout	+ Vout
12	– Vin	– Vin
13	– Vin	– Vin
14	+ Vout	+ Vout
15	– Vout	Com
22	NC	Com
23	NC	– Vout
24	+ Vin	+ Vin
Others	NC	NC

NC = No Connection

Pin Pitch Tolerance ±0.35 mm